U.S. Department of Energy
Directives

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Document type: DOE-Directives

Document: DOE G 423.1-1B, Implementation Guide for Use in Developing Technical Safety Requirements, Review and Comment

Overall Comments

Major comment from Debra Smiley for Bonneville Power Administration
The Bonneville Power Administration (BPA) appreciates the opportunity to comment on draft DOE Guide 423.1-1B, Implementaation Guide for use in developping Technical Safety Requirements. BPA has no edits or comments to the draft Guide as written. Again, BPA appreciates the opportunity to review and comment on the draft Guide.

Response:
Accept

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] There is a brief mention of "Safety Margin" in 10 CFR 830 and the USQ process. However, there is no detailed discussion in DOE directives as to what it means and how it should be determined. This lack of information has led many contractors (e.g., CNS at Y-12) to create their own definition and implementation approach.

Safety Margin is directly related to the TSRs, and more specifically, to the generation of SLs, LCOs, and operating limits.

[S] Include a section in this guide that would address the definition, the derivation, and the use of Safety Margin as applied to TSRs.

Response:
Reject

Rejected – this issue will be addressed in the USQ Guide. Issue dropped by DNFSB Staff

Suggested comment from Steve Duarte for Headquarters GC

Included comments:

SME james.jurich@hq.doe.gov
No Comment

Response:
Accept

Suggested comment from Bill Schwartz for Headquarters HG
This package represents the official, consolidated comments of **Poli A. Marmolejos, Director**
No Comment

Response:
Accept

Suggested comment from Emily Jackson for Headquarters LM
No Comment

Response:
Accept

Suggested comment from Kevin Hagerty for Headquarters MA
This package represents the official, consolidated comments of **N/A - Comment package automatically submitted.**
No Comment

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA
This package represents the official, consolidated comments of **Cathy Tullis**

Included comments:

SME hwm@y12.doe.gov

Suggest that "Standard Industrial Hazards" be mentioned and how they integrate in the hazard control process.

Response:
Reject

Per 3009-2014 SIH are screened out of the DSA development process. SIH are addressed in Part 851 Worker Safety Programs.

SME KELLYDJ@NV.DOE.GOV
It's suggested that some text be added to the guide to account for the deletion of Appendix C - *Technical Safety Requirement Considerations for Nuclear Explosive Operations Including Transportation* that was previously included in DOE G 423.1-1A. This deletion creates a potential disconnect because Hazard Analysis Reports (HAR) for nuclear explosive operations also flow-down to TSRs. This could be addressed by indicating the Guide is also applicable to the flow-down of hazard controls from documented safety analysis methodologies given in 10 CFR 830, Subpart B, Appendix A, Table 2 (safe harbor methodologies) to technical safety requirements.

Response:
Reject

Appendix C was removed specifically at the request of NNSA headquarters.

Suggested comment from PK Niyogi for Headquarters NE
No Comment

Response:
Accept

Included comments:

Jenni Hamilton for Oak Ridge Office-NE
The Oak Ridge Nuclear Energy organizations have no comments to provide at this time.

Response:
Accept

SME gorhamml@id.doe.gov
No Comment

Response:
Accept

SME mcanulmj@id.doe.gov

Consider adding discussion that TSRs should be written to be clear, concise, easily understood by the users, implementable, "surveillable" (verifiable before it becomes applicable) and auditable (able to verify compliance was met). An Effective TSR Control is:

- Meaningful ·Prevents or mitigates a hazard event
- Clear/Concise ·Easily understood by everyone ·No interpretations
- Implementable ·Consistently executed in the field
- Verifiable ·Non-compliance is noticeable before being required
- Auditable ·Reviewable to determine if compliance existed

This generally requires a team effort between safety analysist, TSR developer, Operators, Facility/System Engineers, and Operations Management.

Response:
Accept with Modifications

We believe the current rewrite of this document addresses the intent of this comment.

Suggested comment from Jennifer Ackerman for Headquarters HC
This package represents the official, consolidated comments of **N/A - Comment package automatically submitted.**
No Comment

Response:
Accept

Suggested comment from John Wall for Headquarters CF
This package represents the official, consolidated comments of **N/A - Comment package automatically submitted.**
No Comment

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)
This package represents the official, consolidated comments of **William A. Eckroade, Deputy Director**

SME amacdougall@ntc.doe.gov wrote:

Issue: The technical content of the main body of this guide (excluding the appendixes) does not appear to flow in a logical progression in the manner is which TSRs would actually be developed.

Suggested resolution: A Job task analysis was recently done on how to review and approve a TSR that will be the basis for revising the TSR training course. Expanding the JTA to include how to develop TSRs from the DSA would provide the basis for both developing the necessary guidance in this guide and then providing updated training. The results of the streamlined table top job analysis could be used to develop a logical outline for the guide, and provide the technical basis for content for the guide and needed training classes.

Response:
Reject

FOREWORD

1. INTRODUCTION

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The term "technical safety" is missing "requirements."

[S] Correct to state "...technical safety requirements..."

Response:
Accept

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please change the last sentence to read as follows: "Other methods may be used, provided the resulting TSRs perform their intended purpose to ~~ensure availability and operability of safety structures, systems and components (SSCs).~~ establish the specific paramenters and requisite actions for the safe operation of a nuclear facility."

Note: the reason for this change is to make it consistent with Part 830.

Response:
Accept

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME bundeka@id.doe.gov

The word "requirements" was left out between "technical safety" and "should" in the second to last sentence of this paragraph.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

Section 1.1, last sentence - This sentence provides a narrow purpose for TSRs, namely to ensure availability and operability of safety structures, systems and components (SSCs). It is certain that one of the purposes of the TSRs is to ensure availability and operability of safety SSCs, however, the 10CFR830 definition is broader. i.e., "to establish limits, controls, and related actions necessary for safe operation of a nuclear facility". This would encompass Administrative Controls. May want to consider broadening the purpose statement for TSRs.

Response:
Accept

Wording revised to reflect 830.

Penultimate sentence - Change "...provides a complete description of what technical safety should..." to "... provides a complete description of what technical safety requirements should ..."

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

Page 1, section 1.1, 3rd sentence	Suggested	Issue: The statement a contractor conscientiously following the analytical and drafting methods suggested below has assurance that compliance with 10 CFR 830.205 has been achieved is unclear. For example, what is meant by conscientiously following is both not clear, and is not used in other guides. Action: delete " conscientiously".
Page 1, section 1.1, last sentence	Suggested	Issue: Delete "availability" - the TSRs are intended to define operability requirements and ensure that controls when needed perform their intended safety function. They do not ensure availability of controls.

Response:
Accept

Accepted. Deleted conscientiously

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV

It may be inappropriate to explicitly reference DOE-STD-3009-2014 since this version of the standard is not yet approved. I suggest referencing the current approved version of DOE-STD-3009 with the statement "or successor document."

Response:
Reject

3009 issued in 2014

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME Kathy.McCarty@hq.doe.gov wrote:

Section 1.2 - The title of 10 CFR 830, "Nuclear Safety Management," is not italicized as are other document titles in this guide. Consider italicizing for consistency.

Response:
Accept

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The 2nd paragraph states: "The purpose of TSRs is to ensure that safety class and safety significant SSCs are subject to controls ensuring availability and operability to the degree relied on in the DSA." TSRs include more than just SSCs but also safety-related administrative controls and design features.

[S] Revise the sentence to correctly define the scope and purpose of a TSR document. Suggested wording includes:

"... that safety class and safety significant SSCs are subject to controls ensuring availability and operability and that administrative controls and design features are identified for implementation as relied on in the DSA."

Response:
Accept with Modifications

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please delete or modify the following sentence: "The purpose of TSRs is to ensure that safety class and safety significant SSCs are subject to controls ensuring availability and operability to the degree relied on in the DSA. Section 4 of this guide suggests acceptable methods for extracting TSRs from the DSA."

Note: this sentence interprets the purpose of TSR more narrowly than the provisions of Part 830. Note that neither the definition of TSR nor the regulatory provisions relating to TSRs are limited to SSCs.

Response:
Accept with Modifications

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME james.oneil@nnsa.doe.gov

1.3,

first paragraph, last sentence;

technical specifications is "tech. specs." therefore it's not and "or" between them rather suggest deleting the "or" and adding paranthetical [i.e. (tech. specs.)]

second paragrah, last sentence;

"Section 5 offers...", cannot find Section 5. The only Section 5 I can find is in reference to "Administrative Controls"???

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME WILLIAVD@NV.DOE.GOV
Last paragraph: recommend changing "Independent Implementation of verification Reviews (IVRs)" to "Independent Implementation Verification Reviews (IVRs)" .

Response:
Accept

SME johnsone@y12.doe.gov
Third paragraph, IVR does not stand for Independent Implementation of Verification reviews. Need to correct

Response:
Reject

SME johnsone@y12.doe.gov

Second paragraph refers to section 5 of the guide. There is no section 5.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

In first paragraph, first sentence, add "and DOE P 420.1, Department of Energy Nuclear Safety Policy" after "10 CFR 830".

Response:
Reject

In second paragraph, fourth sentence, add "and SACs" to read:"...safety class and safety significant SSCs and SACs are subject to controls..."

Response:
Accept

Second paragraph. This paragraph provides a narrow purpose for TSRs, namely to ensure availability and operability of safety structures, systems and components (SSCs). It is certain that one of the purposes of the TSRs is to ensure availability and operability of safety SSCs, however, the 10CFR830 definition is broader. i.e., "to establish limits, controls, and related actions necessary for safe operation of a nuclear facility". This would encompass Administrative Controls. May want to consider broadening the purpose statement for TSRs.

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P. 3, Section 1.3, 2nd para.	Suggested	Issue: The paragraph is not accurate in its description of safety basis requirements. Action: Suggest the following word changes: "Analyzing the safety features of an existing nuclear facility or a design for a new nuclear facility begins with development of *a safety basis document*. This process is guided, in the main, by DOE-STD-3009 *for existing nuclear facilities and DOE-STD-1189 for new nuclear facilities or major modifications*. The *hazard and* accident analysis guided by *these standards identify safety controls/assumptions* that are protected at a level commensurate with their importance. The purpose of TSRs is to *confirm the ability of the safety SSC or SAC and personnel to perform their intended safety functions under normal, abnormal, and accident conditions*.

Response:
Accept

2. APPLICATION

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The section states: "A contractor for an environmental restoration activity may follow the provisions of 29 CFR §1910.120 or §1926.65 for construction activities (see 10 CFR Part 830, Subpart B, Appendix A, Table 2) to develop hazard controls rather than TSRs." This statement is inconsistent with Table 2 of 10 CFR 830 that requires using DOE- STD-1120 AND 29 CFR 1910.

[S] Revise the sentence to be consistent with 10 CFR 830.

Response:
Accept

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The term "National Nuclear Security Agency" is incorrect.

[S] Change "Agency" to "Administration."

Response:
Accept

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please modify the last sentence of the first paragraph as follows: "Other formats may be used ~~as long as they meet the content expectations of Appendix A to Subpart B of the Nuclear Safety Management Rule.~~ **to comply with the requirements of 10 CFR Part 830, Subpart B.**

Note: compliance with the Appendix is not required.

Please modify the last paragraph as follows:

A contractor for an environmental restoration activity may follow the provisions of **DOE-STD-1120-98, *Integration of Environment, Safety, and Health Into Facility Disposition Activities,* or successor document, and** 29 CFR Part 1910.120 or Part 1926.65 for construction activities (see 10 CFR Part 830, Subpart B, Appendix A, Table 2) to develop hazard controls rather than TSRs. This option is available when the activity involves either (1) work not done within a permanent structure or (2) decommissioning of a facility with only low-level residual fixed radioactivity. ~~**DOE-STD-1120-2005, *Integration of Environment, Safety, and Health Into Facility Disposition Activities,* also provides guidance that should be considered in the development of TSRs for this type of facility.**~~

Note: these changes are for consistency with the regulation.

Response:
Accept

Major comment from PK Niyogi for Headquarters NE

Included comments:

SME maggarcl@id.doe.gov

The Guide talks about Category 1 and 2 facilities (which could include reactors), and gives reactor examples. But the Guide should acknowledge other national standards that are acceptable for TSR preparation for reactors such as ANS-15.1 and Standardized TS for PWR reactors, and are acceptable methods and sources of guidance. It is clear though, that significant thought went into this Guide, to try to include reactors, but the Guide can't cover both reactors and 3009 facilities completely, and leaves reactor TSRs short.

Suggest that this sentance from paragraph 1 be revised to read: "Other formats and guidance may be used as long as they meet the content expectations of Appendix A to Subpart B of the Nuclear Safety Management Rule.

Response:
Reject

Suggested comment from Jennifer Kelley for Headquarters SC
The Application section does not address the changes defined for this revision to the Guide. Changes defined in this revision that are new are not highlighted, and there is not guidance on applying the changes to existing facilities with approved TSRs. The Guide should not imply that the Guide be used for existing facilities with approved TSRs, or in development of Annual Update revisions. Expectations or 'Application' is not clarified for existing facilities.

Response:
Reject

Not accepted . This guide provides no new requirements.

Major comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.4, Section 2, bottom para.	Major	Issue: It is stated that for packaging and transportation activities the TSR guidance provided is not applicable. The current approved version of the guide did not exclude packaging and transportation activities from developing TSRs (section 4.14 addresses TSRs for transportation). Additionally, DOE G 421.1-2A, *Implementation Guide for Use in*

Developing Documented Safety Analyses to Meet Subpart B of 10 CFR 830, Section 4.2.7 does refer to development of transportation TSRs per DOE G 423.1-1A.

Action: Resolve the inconsistency between DOE G 421.1-2A and DOE G 423.1-1A. Note: If the reference is to offsite packaging and transportation activities, this could be resolved by making that clarification.

Response:
Accept

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The section discusses transportation activities of hazardous materials as governed by hazard controls but not TSRs. Some sites use DOE-STD-3009 as their safe harbor for certain "onsite" transportation activities.

[S] Revise the text to recognize use of DOE-STD-3009 and TSRs for some "onsite" transportation activities.

Response:
Accept with Modifications

wording revised

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please modify this paragraph as follows:

Packaging and transportation of hazardous materials are governed by hazard controls but not TSRs discussed in this guide. **If the methodologies for development of DSAs from 10 CFR Part 830, Subpart B, Appendix A, Table 2, are being used, r**equirements and guidance for such hazard controls are found in the following documents:

- o DOE Order 460.1C, *Packaging and Transportation Safety* (~~**2010),**~~**1996), or successor document;**
- o DOE Guide 460.1-1, *Implementation Guide for Use with DOE O 460.1A, Packaging and Transportation Safety* (1997), **or successor document;**
- o DOE Order ~~**460.2**~~461.1, *Packaging and Transfer or Transportation of Materials of National Security Interest* (~~**2010**~~**2000**), **or successor document;** and
- o DOE Manual 461.1-1, Admin Chg 1, *Packaging and Transfer of Materials of National Security Interest Manual* (2000), **or successor document**.

Note: the changes are for consistency with the regulation.

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov

-->○ DOE Order 460.2, *Packaging and Transfer or Transportation of Materials of National Security Interest* (2010), and

-->○ DOE Manual 461.1-1, Admin Chg 1, *Packaging and Transfer of Materials of National Security Interest Manual* (2000).

DOE Order 460.2 is the wrong reference. It should be 461.2. DOE O 460.2A is another document dated 2004.

DOE M 461.1-1 was archived in 2010 and should be removed as a reference

Note that DOE O 461.2 does speak to a TSR section of the TSD and does refer to LCOs and administrative controls.

Response:
Accept with Modifications

Major comment from Jennifer Kelley for Headquarters SC

This paragraph states that packaging and transportation of hazardous materials are governed by hazard controls but not TSRs discussed in this guide. It further states that requirements and guidance for such hazard controls are found in the following documents: DOE O 460.1C, G 460.1.1, O 460.2 and Manual 461.1-1. O 460.1C and G 460.1-1 are safe harbor methodologies for on-site transportation activities. This fourth paragraph could be interpreted as TSDs for on-site transportation do not require TSRs. Verify that this is the intent. If not, delete paragraph.

Response:
Accept

As written, this appears to indicate that transportation DSAs prepared under one of the referenced safe harbors are not required to have any TSRs. This is contrary to current practice. Was this the intent? If not, then this needs reworded.

Response:
Accept

3. BACKGROUND

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please make the changes as indicated for the following sentence: "DSAs**,** among other things**,** define the performance capabilities of SSCs, and personnel, and are aimed at confirming the ability of the SSCs, and personnel to perform their intended safety function under normal, abnormal, accident, and specified failure conditions.

Note: the transportation requirements and guidance from Table 2 do not require identification of SSCs. Are there additional modifications to this section that can be made to clarify the functions of transportation-related DSAs?

Response:
Accept with Modifications

Accept in part. The use of transportation safety documents have been added to address transportation safety. Clarified for TSDs

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME michael.langford@nnsa.doe.gov
"safety limits" as used in this context does not match the definition of "safety limit" as defined in DOE-STD-3009-CN3. TSRs present more than safety limits. Here is a good chance to introduce the term "control" and mention that types of controls are further discussed in section 4.2 of this guide.

Response:
Accept

SME christopher.fischahs@nnsa.doe.gov

The term 'safety limits' in the last sentence is too limiting; as used in 423.1A, 'limiting parameters' is a more accurate and complete term.

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME michael.langford@nnsa.doe.gov

In my opinion, this paragraph seems to be written as if in a vacuum with respect to some other programs/concepts in DOE. Here is an opportunity to help the reader integrate those programs and concepts with the subject of this guide. For instance:

1. The DSA is a record in accordance with the definition promulgated by NARA. A record documents work performed. The work performed is a rigorous, methodical, safety analysis for the permanent physical structures, systems, and components of a facility including the associated processes.

2. The DSA is the record of implementing the DOE Integrated Safety Management Program for the permanent SSCs. We should use common terms; see how the DSA fits into ISM:

a. Defines the scope of work

b. Identifies hazards

c. Develops controls to prevent or mitigate harm to the worker, public, and the environment (note that environment is not mentioned above -- we have recently noted weaknesses in DSAs that ignore hazards to the environment in the Hazards Identification process).

d. The TSRs are the most important controls that are necessary while performing the work (operating).

e. The USQ and PISA processes are how feedback is provided to keep the DSA updated and implement continuous improvement.

Helping the reader understand the implementation of ISM in the DSA and TSR to facility SSCs would help DSA/TSR preparers across the complex separate hazards in the screening process.

Response:
Reject

Current wording reflects 10 C.F.R. 830 Part B

SME michael.langford@nnsa.doe.gov
The term "specified failure conditions" might be clearer if we substituted "anticipated failure conditions," which is the more accepted term for which failure conditions we specify and analyzed in the DSA. This terminology appears other places in the guide.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

The four objectives stated are not referenced directly to a requirement, order or standard. These objectives should be supported by direct reference to the applicable portion of 830 or DOE Order, standard, etc.

Response:
Accept

First paragraph, last sentence - Delete "defines the bounds for determining the existence of an "unreviewed safety question" and...". This part of the sentence is not germane to the development of TSRs.

Response:
Accept

Background, first paragraph, first sentence - Provide reference to the basis for the four principal objectives that 10CFR830 seek to accomplish. At least three of the four goals were not accomplished. 10CFR830 is not structured to "prevent the uncontrolled release of radioactivity to the environment" (see definition of hazard control). 10CFR830 does not address monitoring of staff exposure to radiation and radioactivity (10CFR835 does). Number 4, "protect the public from exposure to radiation and radioactive contamination" is so broad (i.e., not limited to DOE nuclear facility operations/activities) as to be outside the scope of the Rule (ionizing radiation and non-ionizing radiation?). Suggest that this paragraph be deleted.

Response:
Accept with Modifications

Revised paragraph.

Please change objectives 3 and 4 as shown below. These changes are for consistency with 10CFR830, and to avoid misinterpretation of the intent.

(3) limit ~~**and monitor**~~ facility staff exposure to radiation and ~~radioactivity~~ **radioactive material**; and, (4) protect the public from exposure to radiation and radioactive ~~**contamination**~~ **material**

Response:
Accept with Modifications

Revised paragraph.

Major comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.5, Section 3, 1st para.	Major	Issue: A statement is made that nuclear safety requirements in 10 CFR 830 seek to accomplish four principal objectives. The four objectives only address radiological hazards and are not consistent with wording in the rule itself or DOE P 420.1, *Department of Energy Nuclear Safety Policy*. Action: Revise the statement. Suggest replacement with the following: "It is the policy of the Department of Energy to design, construct, operate, and decommission its nuclear facilities in a manner that ensures adequate protection of workers, the public, and the environment (DOE P 420.1). The safety basis requirements of 10 CFR 830 require the contractor responsible for a DOE nuclear facility to analyze the facility, the work to be performed, and the associated hazards and to identify the conditions, safe boundaries, and hazard controls necessary to protect the worker, the public and the environment from adverse consequences. These analyses and hazard controls constitute the safety basis upon which the contractor and DOE rely to conclude that the facility can be operated safely (10 CFR 830, Appendix A, Section B)."

Response:
Accept

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The 2nd paragraph states: "TSRs can be viewed as a distillation of the DSA's analytical results for the required performance of safety SSCs." Similar to comment number 2 above, TSRs are more than just related to safety SSCs; TSRs also include administrative controls and design features.

[S] Revise the text to include identification of administrative controls and design features.

Response:
Accept

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please delete the first sentence. It does not include some of the functions of TSRs in the definition of TSRs in Section 830.3.

In the last sentence of the first paragraph, please delete "nuclear operations can commence" and put "the TSRs are used" in its place. Please add "Typically," at the beginning of the next paragraph.

These changes are for consistency with the regulation.

Response:
Accept with Modifications

Accept in part. Revised paragraph.

SME robin.henderson@hq.doe.gov

Please delete the first sentence. It does not include some of the functions of TSRs in the definition of TSRs in Section 830.3.

In the last sentence of the first paragraph, please delete "nuclear operations can commence" and put "the TSRs are used" in its place. Please add "Typically," at the beginning of the next paragraph.

These changes are for consistency with the regulation.

Response:
Accept with Modifications

Accept in part. Revised paragraph.

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME michael.langford@nnsa.doe.gov
We wouldn't refer to "Section 5" as the top level DSA heading. Rather, we use the term "Chapter 5."

Response:
Accept

SME michael.langford@nnsa.doe.gov
TSRs have "administrative controls" versus "administrative procedures" -- this appears to be an inappropriate term in this context.

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME michael.langford@nnsa.doe.gov

In the first sentence, the term "safety SSCs" is incorrectly used in this context. Several types of safety SSCs are identified and selected in the hazard analysis process (listed in order of descending safety importance):

1. Safety Class (SC)

2. Safety Significant (SS)

3. Defense in Depth (DID) (a concept rather than a type of SSC; but an SSC might be elevated SC or SS if needed in the safety analysis for DID purposes)

4. Other Structures, Systems, and Components important to safety

The DOE has a defined term for SC and SS SSCs, specifically: "safety-related." Only safety-related controls are found in the TSRs, therefore, this is correct term to utilize in the context here. The majority of safety SSCs are not elevated to the SC or SS level and therefore are not in the TSRs.

The TSRs also discuss some admin controls and define the Safety Management Programs, which are not mentioned in this paragraph.

Response:
Accept

SME michael.langford@nnsa.doe.gov
The sentence "TSRs can be viewed as a distillation of the DSA's analytical results for the required performance of safety SSCs" is too narrow in its scope. The TSRs have more than just SSC controls. Having identified "safety limits" as "controls" as I suggested elsewhere, then its more accurate to describe TSRs a the selected subset of all controls that are determined by the documented safety analysis to be most important (i.e., safety-related or in other words SC or SS).

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME bundeka@id.doe.gov
This "Section 5 of a facility's DSA identifies needed TSRs " should be changed to "Chapter 5 of a facility's DSA identifies needed TSRs "

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

Second paragraph of section 3, first sentence - add "SACs" to read: "...performance of safety SSCs and SACs."

Response:
Accept

Third paragraph of section 3, change to read: "...variables, SSCs, and administrative controls that are selected to ensure safety."

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME Kathy.McCarty@hq.doe.gov wrote:

Section 3, third paragraph - This paragraph references "Section 5" of the facility's DSA. For consistency within the document, recommend changing "Section" to "Chapter."

Response:
Accept

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] Statement in 4th paragraph says, "This situation may obtain..."

[S] Change the statement to, "This situation may exist..."

Response:
Accept

Accepted. Clarified.

DNFSB Comments:

[C] The last sentence of this section states that Appendix C regarding Implementation Verification Reviews (IVRs) is a "recommended procedure" for the conduct of an IVR. Appendix C is more properly characterized as providing guidance for planning and conducting IVRs.

[S] Revise the sentence to state: "Appendix C provides guidance for the planning and conduct of the IVR."

Response:
Accept with Modifications

Accepted in part – wording revised

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please modify the second paragraph as follows:

The DSA and **hazard controls, including** TSRs and facility-specific commitments**,** when approved by DOE in a safety evaluation report (SER) constitute the nuclear safety basis and facility authorization from DOE for the contractor to operate Hazard Category 1, 2, and 3 nuclear facilities. Following approval of the DSA and **hazard controls** ~~**TSR**~~ and issuance of the SER, the nuclear safety basis must be fully and effectively implemented prior to the start of nuclear operations in accordance with 10 CFR 830. An IVR should be conducted to assure the full and effective implementation. Appendix C is a recommended procedure for the conduct of the IVR.

Response:
Accept with Modifications

Accepted in part - wording revised with commentator to reflect intent.

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME michael.langford@nnsa.doe.gov

Sentence "In some cases, the DSA may not supply all of the input necessary for the development of a TSR." is wrong in so many ways. Controls do not appear in the TSRs that have not been developed in the DSA. Such a condition implies a potentially inadequate safety analysis. Even bases that are not derived in the DSA are discussed and their use is explained in

the DSA.

It appears that the rest of this paragraph discusses some sources for supporting a defensible bases for TSR controls and surveillance periodicity (frequency). "This situation may obtain in areas..." doesn't make any sense to this reviewer. The problem I see with this paragraph is that it doesn't discuss TSR bases at all but mixes up and introduces "design basis documentation" with "nuclear maintenance management program" required by Subpart A with consensus standards with other sources for selecting design bases. My guess is that the author is trying to explain that some controls are derived by calculations in the DSA (e.g., radiological and chemical exposure levels) while some are derived from other sources. If this assumption is true, that is I understand the intent, then the paragraph is sorely in need of re-writing in the opinion of this reviewer.

Response:
Accept with Modifications

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov

In the first paragraph of this comment section, change the second sentence to read ...This situation may *occur* in areas such as...the "may obtain" does not make sense.

In the last paragraph, Appendix C is not a recommended procedure for the conduct of an IVR, it is recommendations for an IVR process.

Response:
Accept

SME michael.langford@nnsa.doe.gov
This is the first use of the term "implemented" in the guide. Here is an opportunity to define the term in this context, which has a reserved meaning in our lexicon. If we don't want to define it here, then we should at least explain that the meaning of the term is explained in the "IVR" section later in the guide. This would tie the guide together better for the reader.

Response:
Reject

Appendix C is referenced in the next sentence.

SME christopher.fischahs@nnsa.doe.gov

Wording in the second sentence is confusing to the reader: "This situation may obtain in areas such as ...." Perhaps, arise? or raise its ugly head?

Response:
Accept

SME brownmb@nv.doe.gov

Second Sentence.

Change, "This situation may obtain in areas such as maintenance and surveillance frequencies and compensatory measures for systems out of service."

To, "This situation may apply in areas such as maintenenc and surveillance frequencies and compensatory measures for systems out of service."

Response:
Accept

SME michael.langford@nnsa.doe.gov
The term "implemented" is not defined in the procedure. Experienced personnel may know what that means, but it would benefit from better definition in this paragraph.

Response:
Accept with Modifications

Changed "procedure" to "approach". Appendix C addresses implementation.

Major comment from Jennifer Kelley for Headquarters SC

Change wording from "The DSA and TSRs and facility-specific commitments when approved by DOE in a safety evaluation report (SER) constitute the nuclear safety basis and facility authorization from DOE for the contractor to operate Hazard Category 1, 2, and 3 nuclear facilities." to "The DSA and TSRs and facility-specific commitments and safety evaluation report (SER), when approved by the Safety Basis Approval Authority, constitute the nuclear safety basis and facility authorization from DOE for the contractor to operate Hazard Category 1, 2, and 3 nuclear facilities.".

DOE-STD-1104-2009 section 4.0 SAFETY EVALUATION REPORTS indicates that the SER is part of the safety basis when it states: "The DSA, TSRs, SER, and conditions of approval should provide an acceptable safety envelope for the facility/activity/program." It also states "The review process results in the generation of an SER integral to the facility's authorization basis." A very important basis for including the SER as part of the safety basis is also given in DOE-STD-1104-2009 when it states: "Approval statements addressing specific areas of the safety basis are augmented with brief summaries of the most significant facility-specific points in those areas to provide a basic context to understand what is being approved."

Since a DSA is not considered to be part of the safety basis until it is approved by DOE, the context that provides DOE's understanding of what is approved is necessarily part of what is being approved and it is thereby a necessary integral part of the safety basis. The possibility exists that there may be an undetected difference in interpretation and the safety basis is that which DOE approved, which may be different than what the contractor intended. The SER provides information about DOE's understanding of the safety basis documents and forms an important part of the safety basis by providing a basis for interpreting what DOE has approved.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

Last paragraph is written in the sense of initial approval of DSA and TSR; include revisions to DSAs and TSRs. In last sentence, change "a recommended procedure" to "recommended guidance"

Response:
Accept

Fourth paragraph of section 3, second sentence - change to read: "This situation may occur in areas...

Response:
Accept

4. DEVELOPMENT AND CONTENT OF TECHNICAL SAFETY REQUIREMENTS

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] In the 2nd paragraph, the two citations involving 10 CFR Part 830 are missing the "830."

[S] Correct the citations.

Response:
Accept

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

At the beginning of the second sentence of the first paragraph, please change "A" to "An."

At the end of the first paragraph, please make the following changes: Table 4 of Appendix **A~~B~~** to 10 CFR Part 830**, Subpart B.**

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME michael.langford@nnsa.doe.gov
The reference "10 CFR 205(a)(2) is an incomplete reference. This CFR has many sub parts.

Response:
Accept

SME christopher.fischahs@nnsa.doe.gov

The sentence is not factually accurate: "The output of the TSR development process is a set of TSRs that controls all of the safety parameters relied upon in the DSA." The TSRs are a subset of the safety parameters relied upon ... Many safety parameters described in the DSA are not carried forward into the TSRs (e.g., equipment configuration, safety reliance upon other equipment important to safety, implicit assumptions for adhering to consensus codes and standards, ecetera).

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME michael.langford@nnsa.doe.gov
"A individual" is a misuse of the article modifying "individual."

Response:
Accept

SME brownmb@nv.doe.gov

Second Sentence.

Change, "A individual control may be governed by several different types of TSR, depending on the consequences associated with loss of control of that parameter"

to "An individual control may be governed by several different types of TSR, depending on the consequences associated with loss of control of that parameter."

Response:
Accept

SME christopher.fischahs@nnsa.doe.gov

The sentence "A individual control may be governed by several different types of TSR, depending on the consequences associated with loss of control of that parameter" can be misinterpreted to suggest that TSRs can address controls in a variety of ways (to include administrative controls). While true, the manner that TSRs address each control are dependent upon the control's DSA-derived safety designation. (Additionally, the term 'may' is very ambiguous.)

Response:
Accept

SME michael.langford@nnsa.doe.gov
First use of "safety parameters" in the document. Now would be a good time to list the type of safety parameters, specifically: safety limits, operating limits, surveillance requirements, administrative and management controls, and design features as discussed further in Section 4.2. This would link the guide together for the reader.

Response:
Accept

SME KELLYDJ@NV.DOE.GOV
Recommend changing the first sentence to state "TSR development is done in conjunction with the completion of the DSA." There is no reason to hold TSR development after the completion of the DSA. It is recognized that TSRs can't be finalized until the DSA is completed.

Response:
Accept

SME Jessy.Innocent@nnsa.doe.gov

- Second sentence: "An individual" instead of "A individual"

Response:
Accept

SME johnsone@y12.doe.gov
First paragraph, third sentence, you should say high consequences may demand the use of a safety or operational limit. Some very high consequence facilities and operations do nt have safety limits (SLs) they have LCOs.

Response:
Accept

Wording revised.

Major comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
The citation for the nuclear safety rule should be corrected, e.g. "10 CFR 830.205(a)(2)"

Response:
Accept

Major comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.6, Section 4, 1st para. Major

Issue: The following is stated: "A individual control may be governed by several different types of TSR, depending on the consequences associated with loss of control of that parameter. Low consequences may be dealt with by an administrative control, while high consequences may demand the use of a safety limit." This doesn't make sense and is inconsistent with hazard/accident analysis control derivation. If the intent is to describe a safety limit, the associated limiting control setting, and the limiting condition for operation, then describe this process as worded in the rule.

Action: Delete the statements and provide a description that is consistent with rule.

Response:
Reject

Not accepted. While information related to job task analysis is important, it is better suited to training classes.

SME Kathy.McCarty@hq.doe.gov wrote:

Section 4, second paragraph - The second sentence addresses the rule requirement for contractors to submit TSRs to DOE for approval. However, it does not explicitly state that this approval must take place "prior to use" as required by the rule. Recommend that this sentence be modified to read "As required by 10 CFR 830.205(a)(2), this set of TSRs must be submitted by the contractor to DOE for review and approval prior to use." Also, the reference to 10 CFR §205(a)(3) in the next sentence should read 10 CFR 830.205(a)(3).

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.6, Section 4, 1st para. Suggested

Issue: It is stated that TSR development begins with completion of the DSA. DOE-STD-1189 for new nuclear facilities identifies that a PDSA does provide a chapter 5 that addresses preliminary derivation of TSRs.

Action: Suggest the changes: "TSR development begins with completion of the DSA *or completion of a PDSA for new nuclear facilities*."

Response:
Accept

Removed completion.

SME Kathy.McCarty@hq.doe.gov wrote:

Section 4, first paragraph - This paragraph refers to Table 4 of "Appendix B" to 10 CFR Part 830. The rule does not have an Appendix B. Table 4 is found in Appendix A to Part 830. Recommend changing the reference to the Appendix from "B" to "A."

Response:
Accept

4.1 TSR Development - Inputs from the DSA

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The section states: "...the list of controls should include all DSA commitments to provide TSRs for safety-class and safety-significant SSCs and SACs." TSRs also include commitments to administrative controls, design features and safety management programs.

[S] Revise the text to correctly describe the DSA commitments that also include administrative controls, design features and safety management programs.

Response:
Accept with Modifications

Accept in part. The term Administrations Controls was added, which addresses SACs and SMPs

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME brownmb@nv.doe.gov
Not sure if an adequate link in terms of consequence has been established in document regarding Administrative Controls. Linkage is identified for Safety Limits developed into Safety Requirements. Administrative controls are discussed but consequence not linked to either programmatic controls or SAC.

Response:
Reject

Current wording deemed adequate.

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.6, Section 4.1, 1st para.	Suggested	Issue: The paragraph does not recognize that SMPs are also carried forward into the TSRs per 830 Appendix A, Table 4, Administrative controls. Action: Revise the statements to be consistent with 10 CFR 830, Appendix A, Table 4, Administrative controls.

Response:
Accept

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] Below the "information from the DSA should be used to begin constructing TSRs," the bullet list appears to be missing functional requirements and associated performance criteria and other outcomes of calculations and analyses that need to be considered in the TSR (e.g., ventilation air exchange, height of a berm, fire suppression water flow rate).

[S] Revise the bullet list to more comprehensively capture the information that needs to flow into the generation of TSRs.

Response:
Accept

Accepted – wording added to first bullet to address concern

Suggested comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov
Should use semicolons rather than commas at the end of each bullet except the last.

Response:
Accept

Major comment from Jennifer Kelley for Headquarters SC
This subsection of the Guide lacks guidance on the selection of what controls rise to the level of warranting TSR control. The reader may understand that all of the bulleted controls warrant SR specification. The draft revision jumps from listing DSA controls (4.1) to assuming the items for TSR inclusion have been determined (4.2). The guidance in the current Guide (sect. 4.3 and 4.9) on TSR minimization should be included.

Response:
Reject

Not accepted , should be in DSA

Suggested comment from Jennifer Kelley for Headquarters SC
This listing implies that all elements have equal weight when initiating TSR composition. Suggest rewording that all other elements are used to the extent needed to support the TSRs as derived in DSA Chapter 5.

Response:
Accept with Modifications

Major comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.6, Section 4.1, Listing of bullets	Major	Issue: The listing of information from the DSA that is identified as providing for the construction of TSRs is a listing of various types of information that is not consistent with how control functions are built upon as analysis from chapter 3 is used for chapter 4 and is used for chapter 5. DOE-STD-3009 requires safety functions identified for safety controls in chapter 3 to be further evaluated in chapter 4 (functional requirements and performance criteria are developed) and exactly how these controls will be treated in the TSRs (e.g., LCOs or DFs etc.) is provided in chapter 5. Action: Revise the bullets to provide a logical sequence in development of control safety functions, functional requirements and performance criteria that support the hazard/accident analysis and lead to the appropriate treatment of controls in the TSRs. Refer to 10 CFR 830, Appendix A, Section G, Hazard Controls, paragraph 3.

Response:
Accept with Modifications

4.2 Determining the Type of TSR Control

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Should use semicolons at the end of each bullet, except the last, which should have a period.

The second paragraph refers to "the subsequent guidance." The location of this guidance should be described.

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME michael.langford@nnsa.doe.gov
Parenthetical clarification (including Programmatic and Specific Administrative Controls) is incomplete. I suggest changing to read "(including Programmatic, Specific, and Management Controls)," which is more correct.

Response:
Reject

The wording is consistent with the current definition used in Standard 1186. The Standard only specifies two type of AC Programmatic and Specific.

SME michael.langford@nnsa.doe.gov

Note to author:

The term "TSR control type" is used correctly here. By incorporating my earlier comments about using "control(s)," this guide would be more internally consistent.

Response:
Accept

Guide scrubbed to ensure consistency.

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
Recommend putting the Safety Limit definition in quotation marks to be consistent to other sections of the guide that incorporate definitions from 10 CFR Part 830.3.

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME christopher.fischahs@nnsa.doe.gov

The sentence "The LCO defines an active safety function of the SSC or SAC and how it is maintained" can be easily misinterpreted to imply that the LCO should include the safety function of the safety SSC. However, this is not generally true. Instead, the LCO must describe both active and passive features of the SSC that enable it to meet its functional requirements. For example, an unobstructed flow path of fire water from the fire water tank to the sprinklers (passive); fire water tank level > 22 feet (passive), two SC diesel fire water pumps (active), etcetra. Further, "how it is maintained" is not typically included in the LCO... using the term 'maintained' literally.

Response:
Accept

SME johnsone@y12.doe.gov
Third condition (3) should be "define actions to be completed when the limiting condition is not met"

Response:
Accept

SME christopher.fischahs@nnsa.doe.gov

LCOs do not necessarily define the SSC's associated maintenance requirements; many of these are consensus code driven or otherwise specified by the equipment manufacturer. Just because an LCO doesn't describe any maintenance requirement, it should not necessarily be considered operable if preventive maintenance is not performed on it.

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV

Recommend deleting the word "vital" from the last sentence that starts with "Vital passive SSCs..." The term "vital" is often misconstrued to include only important to safety.

Response:
Accept

SME christopher.fischahs@nnsa.doe.gov

There is no technical justification or basis provided for the sentence "Vital passive SSCs, such as a rated, sealed fire wall, may be covered by LCOs if they are explicitly relied upon in the DSA to mitigate a design basis event." What does it matter "if they are explicitly relied upon in the DSA to mitigate a design basis event." Suggest just say that passive safety SSCs are typically covered by LCOs or as design features in the TSRs, depending upon the failure modes of the SSCs and there propensity of change (i.e., the difference between a fire rated safe changing locations and a fire rated canister are significantly different).

Response:
Accept with Modifications

Major comment from Jennifer Kelley for Headquarters SC
Last paragraph, third sentence. This sentence states that " The LCO defines an active safety function of the SSC or SAC." This is incorrect. The DSA specifies the SSC safety function. The LCO defines the performance requirement to meet the safety function.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

In the list of minimum conditions necessary, item (2) - add "or the condition of the SAC is met".

Response:
Accept

In last paragraph, first sentence - add "& SACs" to read: "...cover active safety class and safety significant SSCs & SACs identified..."

Response:
Accept

In last paragraph, second sentence - add "and SACs" to read: "Such SSCs and SACs might include, ..."

Response:
Reject

Not accepted . The examples are all SSCs.

Change "or SAC" to "(or SAC if in LCO format)".

Response:
Reject

Since written as "In other cases," this seems to imply that sealed fire walls may only be addressed by LCOs and not as Design Features

Response:
Reject

Last paragraph - Selection of a SAC over an active SSC for flexibility of implementation or natural tendency would be contrary to DOE-STD-1186. Suggest discussing link to DOE-STD-1186 and its two methods of handling SACs in the TSR (1) directive action and (2) LCO.

Response:
Accept with Modifications

Section 4.2.4 addresses SACs and link to STD-1186.

Second paragraph, third sentence - This sentence should be revised to "When the DSA states that a SAC is relied on as a control needed to prevent or mitigate an accident scenario and has a safety function that would be SS or SC if the function were provided by an SSC." This will make this sentence consistent with DOE-STD-1186-2004. Stating that when the DSA states that a SAC is relied on for safety is too generic. ACs can be relied on for safety but may not need to be elevated to a SAC designation.

Response:
Reject

Not accepted . TSRs for SACs may be of two types: LCOs or administrative limits. Addressed in 4.2.3 and 4.2.4. See 1186 for more description.

The criticality alarm system should not be included here as an example LCO, as it is not one of the primary credited controls for preventing a criticality accident. The preferred approach for preventing a criticality accident is defined by NCSE controls through the double contingency evaluation process. The value of the criticality alarm system as an LCO in mitigating worker or public dose is very debatable. The example is thought to be poor as it does not reflect the main approach for dealing with the potential for inadvertent criticality, which is prevention controls.

Response:
Reject

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.7, Section 4.2.3, 1st para.	Suggested	Issue: The treatment of support equipment is not explicitly addressed, e.g., embedded within LCO or developed as a separate LCO. Action: Provide clarification addressing how support SSCs should be treated.

Response:
Reject

Not accepted. Covered in subsequent discussion.

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The 3rd paragraph states: "ACs supporting effective safety administration covers ..., and TSR deviations." It is not clear what TSR deviations means in this context. Perhaps the term TSR "violations" is intended.

[S] Correct or clarify use of the term TSR "deviations" in the sentence.

Response:
Accept

Accepted – meaning clarified

DNFSB Comments:

[C] In the 4th paragraph, the context for an active SSC being "covered" by a SAC appears inappropriate.

[S] Revise the sentence. Suggested language includes: "In some situations, the DSA may identify a SAC to implement the function of an active SSC."

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME christopher.fischahs@nnsa.doe.gov
The sentence "SACs may be acceptable for ensuring safe operation in some cases, but they generally do not connote the same level of reliability associated with an LCO" is not technically correct; SACs generally do not connote the same level of reliability associated with an engineered control.

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
The term programmatic adiminstrative control is used differently in this section than in Section 4.3.5

Response:
Reject

Current wording deemed adequate

SME KELLYDJ@NV.DOE.GOV
In the first paragraph, DOE-STD-3009 should also be cited for guidance on the development and use of SACs.

Response:
Reject

Standard 3009 only provides guidance on the selection of SACS. Standard 1189 provides guidance on use and development. Since the purpose of this guide is to provide guidance on the Development of TSR, referencing only 1189 is appropriate.

SME KELLYDJ@NV.DOE.GOV
In the second paragraph, the description of safety programs should be consistent to the definition of safety management programs defined in 10 CFR 830.3. For example, maintenance should be maintenance of safety systems, and criticality safety should be inadvertent criticality protection.

Response:
Reject

Wording is okay as written.

Major comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
This misses the general specific-action AC. There are three types: Programmatic ACs, ACs, and Specific Administrative Controls. DOE-STD-1186 states, "Similar to the classification of Structures, Systems, and Components (SSC) as Safety SSCs, not all ACs requiring specific actions related to individual accident scenarios rise to the level of importance of SACs, as discussed in the previous paragraph. Similar to SSCs of lower importance, which are sometimes referred to as "important to safety" or "defense in depth" SSCs, SACs of lesser importance can be addressed under the implementation of related Safety Management Programs. However, when a specific action AC is elevated to the class of SAC, then the guidance of this Standard should be used to enhance assurance of the effectiveness and dependability of these important administrative controls beyond that which might be experienced if the specific action AC were simply to be implemented under the auspices of a Safety Management Program." Violation of a Programmatic AC is generally not a TSR violation. An AC that is of lesser importance than a SAC but is written as a specific-action AC, violation of that AC is considered a TSR violation. This could be stated that there are two types of ACs: Programmatic and specific-action AC. Specific-action ACs that take the place of a SS-SSC or SC-SSC are SACs.

Response:
Accept with Modifications

Wording revised to clarify statement.

Suggested comment from Jennifer Kelley for Headquarters SC

The last part of this section states that "...SACs may be acceptable for ensuring safe operation in some cases, but they generally do not connote the same level of reliability associated with an LCO". Since some SACs may be structured as LCOs, this sentence needs clarification.

Response:
Accept

Accepted - clarifed to mean engineered controls

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P. 8, Section 4.2.4, 4th para.	Suggested	Issue: There have been several instances where the treatment of an SSC supporting a SAC has not been captured in the TSRs. The SAC focuses on the specific operator action required and the SSC supporting the SAC safety function is left out. Additional guidance addressing these instances is needed. Action: Provide additional guidance addressing how SSCs supporting the SAC are to be treated in the TSRs.

Response:
Accept

Wording revised per agreement with commentor to clarify statement.

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] In this section on Design Features (DFs), the first sentence states: "Design features (DF) are those passive controls that, if altered or modified, could have a significant effect on safe operation." The concept of degradation from aging is not explicitly noted. Such aging is a serious problem within the DOE Complex and is the basis for many of the surveillances or inspections necessary for DFs.

[S] Incorporate aging of DFs into the sentence. Suggested wording includes: "Design features (DF) are those passive controls that, if altered, modified, or degraded by aging effects, could have a significant effect on safe operation."

Response:
Accept with Modifications

Accepted in Part – Added 2nd sentence in last paragraph in 4.3.6: "Some DFs have the potential to be degraded by the effects of aging."

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
How are we to handle design features that must be put in place by an operator in order to perform their function, such as retaining pins, or blast shields that must be lowered after loading a vessel, etc. It appears that a SAC would be required it implement the passive DF.

Response:
Reject

If you have to manipulate something it is not a passive DF. Active actions need to be covered by the TSR guide.

Suggested comment from Jennifer Kelley for Headquarters SC
Delete "glove boxes" in the examples. This can be construed as establishing the expectation that glove boxes should be design features. The determination that glove boxes may need to be identified as design features is too complex to be a good example.

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.8, Section 4.2.5, 1st para.	Suggested	Issue: The requirement for the development of in-service inspections (ISIs) for DFs is not addressed.

Action: Provide clarification addressing the need to develop ISIs for DFs.

Response:
Accept with Modifications

The need to develop ISI is covered in 4.3.6

4.3 TSR Document Organization

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The guidance on TSR document organization and content does not clearly address the need/use of the example General Limiting Conditions for Operation (LCOs) of Figure 7a in Appendix B or the example General Application Surveillance Requirements (SRs) of Figure 7b in Appendix B.

[S] Incorporate discussion of the General Application LCOs and SRs in Section 4.3.

Response:
Accept with Modifications

Accept in part. General LCO and SR are covered in 4.3.4.8.

Suggested comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov
Semicolons should be used at the end of each bullet, except the last, which should have a period. This comment pertains to other parts of the Guide, but I will not repeat the comment for the rest of them.

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME Jessy.Innocent@nnsa.doe.gov

Design features as described in the previous segment does not elaborate enough about other "engineering controls" that may provide a shield to employees.

Response:
Reject

Current wording is adequate shielding is covered in 4.2.5 and 4.3.6

Suggested comment from Jennifer Kelley for Headquarters SC

Suggest not specifying the location in the document where the record of changes be located.

Response:
Reject

Not accepted . Suggested location of sections have been in guide since the guide was developed.

Not all TSR documents and associated document control processes allow partial TSR document changes that would need a List of affected pages. Where individual TSR page changes are allowed, a list of affected pages should be used. However, at sites/facilities where TSR changes are only issued as a revised document a list of affected pages should not be specified. A caveat should be added that a list of affected pages is only required when individual TSR page changes are used.

Response:
Accept with Modifications

Accept in Part. Wording revised from "should" to "maybe."

As with the previous comment, this should be required only at sites/facilities where individual TSR page changes are used. A caveat should be added so that this is not construed as being required for all TSR documents. Otherwise it will end up driving format changes to existing TSR documents.

Response:
Accept with Modifications

Accept in Part. Wording revised from "should" to "maybe."

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments for 4.3.2 and 4.3.4.5

[C] Regarding the sections on Completion Times and Action Statements, some TSRs allow completion time to be the time needed to "prepare a plan" for restoring the system into compliance with the TSR without having to do any physical changes to the system or implementing any compensatory measures. This type of Action statement should be described and discussion included in the Guide to strongly discourage this practice.

[S] Include a discussion to clearly address and discourage preparation of plans for returning a system to compliance without having to do any physical changes or implement any compensatory measures.

Response:
Accept with Modifications

Accepted in Part – note added to address that simply preparing a plan for returning a system to compliance is inadequate

DNFSB Comments for RLSO 4.3.2:

[C] There was informative guidance in Section 4 of the current Guide (DOE G 423.1-1A) that is being deleted. In particular, the guidance about segmentation, compliance with the requirement of the Nuclear Safety Management Rule, conditions outside of TSRs (explicitly noted in the Rule), etc. were deleted.

[S] Include the guidance about segmentation, compliance with the requirement of the Nuclear Safety Management Rule, and conditions outside of TSRs. Revisit other deleted guidance for inclusion.

Response:
Reject

Rejected – Comment dropped by the DNFSB Staff

Suggested comment from Jennifer Kelley for Headquarters SC
Revise "should include at a minimum" to simply "should include." Otherwise it sounds like a requirement. Note - "Logical Connectors" is included in the list but there is no following paragraph explaining that topic as there is for others in the listing.

Response:
Accept

In second paragraph under Operating Modes, second - change to read: "in the "safest mode," certain TSR requirements may not apply.

Response:
Accept

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
It should be mentioned for sites with multiple facilities, that care should be taken with having similar definitions. For example: if two facilities define OPERABLE differently, confusion between the TSR definition can exist which may result in a non-compliance. If I use a generic site-wide TSR, the definitions in the facility-specific TSR should not conflict with the generic site-wide TSR.

Response:
Reject

This is an implementation issue.

Major comment from Jennifer Kelley for Headquarters SC
The paragraph on Operating Modes should reference to the DSA, Section 5.4, "Derivation of Facility Modes". The TSR modes should be consistent with the modes derived and specified in the DSA.

Response:
Accept with Modifications

Accept in part. DSA referenced.

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments for 4.3.3:

[C] The current Guide (DOE G 423.1-1A) has a short discussion regarding the need for alarms to protect the SL. This discussion seems to have been deleted even though it was a good safety practice.

[S] Include the short discussion back into the Guide,

Response:
Reject

Rejected – Issue dropped by board staff

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please change the introductory language as follows:

Appendix A to Subpart B of 10 CFR Part 830 defines **and explains** safety limits **(SLs)** as follows:

Note: the reason for the additional words is for accuracy and to make the sentence more consistent with the definition in the regulation.

Response:
Accept with Modifications

Accept in part. Wording revised to reflect 830.

Major comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME Kathy.McCarty@hq.doe.gov wrote:

Section 4.3.3, first paragraph - This paragraph "defines" the term "Safety Limits" and references Appendix A of 10 CFR 830 [Table 4] as the source of the definition. However, this term is defined in 10 CFR 830.3 and not Table 4 of Appendix A (as previously stated in section 4.2.1 of this guide). Table 4 sets the DOE expectations for describing "Safety Limits." Recommend that the lead-in statement to the paragraph be modified to read "Appendix A to Subpart B of 10 CFR Part 830 describes DOE expectations for safety limits as follows:" (or some similar verbiage). This comment also applies to the following sections of the draft guide: 4.3.4.1, 4.3.4.2, 4.3.4.3, 4.3.4.8, 4.3.5, 4.3.6, and 4.3.7.

Response:
Accept

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov
Please spell out "HA/AA."

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV

HA/AA should be spelled out since this is the first time usage of this acronym in the guide.

Response:
Accept

SME KELLYDJ@NV.DOE.GOV

"TSA" should be changed to "TSR" in the second sentence of the last paragraph.

Response:
Accept

SME johnsone@y12.doe.gov
Last paragraph, second sentence, TSA setpoints should be TSR setpoints.

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov

"TSA" should be "TSR"

Response:
Accept

Major comment from Jennifer Kelley for Headquarters SC

The last paragraph of section 4.3.3 is very concerning. My experience is that TSR set points and values assumed in the DSA are generally the same. This ensures consistency and that assumptions or changes in the DSA are accurately reflected in the TSR. Calibration and instrument uncertainty (and drift) are accounted for via facility procedures. This allows for exibility in operations. If an instrument fails and an identical instrument is not available, another satisfactory instrument can be installed and procedures modified to account for the new nstrument's uncertainties without requiring a change to the TSRs. Instruments in the field are not generally set at TSR set points, but are set more conservatively to account for the factors mentioned above.

Recommend deleting the last paragraph of section 4.3.3. At the very least, if it is left in, an additional paragraph should be added to address the alternate (and in my experience, more common) method of dealing with TSR set points.

Response:
Reject

Not accepted . Current wording is correct.

Suggested comment from Jennifer Kelley for Headquarters SC

The purpose of description of passive barriers being included in section for Safety Limits is not explained; linkage to SLs needs to be added. LCS paragraph seems to fit better in LCS section, 4.3.4.2.

Correct "TSA" to"TSR".

Response:
Accept with Modifications

Accept in part. Description revised

..."Because the values and set points in the TSR are measured and hence have some margin of error, ~~TSA~~**TSR** set points should be chosen on the conservative side of the DSA assumptions."

"HA/AA" acronyms need to be defined.

Response:
Accept

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments for 4.3.4

[C] The language related to establishing limiting control settings (LCS) and Limiting Conditions for Operation (LCOs) does not include a clear expectation that LCS and LCOs must be developed in a systematic manner so as to account for uncertainties in analysis, instrument drift, instrument error, and other sources of measurement error.

[S] Revise the language in this section (and elsewhere in the Guide as applicable) to reflect the need of adhering to a formal setpoint methodology in establishing an LCS and accounting for various uncertainties for LCOs in developing TSRs.

Response:
Accept

Accepted – wording added to 4.3.4 to provide guidance to TSR to account for uncertainties in analysis, instrument drift, instrument error, and other sources of measurement error.

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov

Please change the introductiory language as follows:

Appendix A to Subpart B of 10 CFR Part 830 defines **and explains** operating limits as follows:

Note: the reason for the additional words is for accuracy and to make the sentence more consistent with the definition in the regulation.

Please make the same changes in 4.3.4.2, 4.3.4.3, 4.3.4.8, and 4.3.5.

Response:
Accept with Modifications

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV

The first sentence should be revised to more accurately capture the text of 10 CFR 830, Subpart B, Appendix A that indicates "the
section of the technical safety requirements on Operating Limits will provide information on: This is technical content expectation of 10 CFR 830 vice a definition.

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.12, Section 4.3.4.1, 2nd para.	Suggested	Issue: It is stated that DOE TSRs generally do not contain a separate section titled "Operating Limits." This statement is not necessarily accurate. Several DOE TSRs have a Section 3.0 titled "Operating Limits." Action: Suggest deleting the statement.

Response:
Accept with Modifications

Wording changed from generally to may.

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] Rules # 2 and 3 for Limiting Control Settings appear to allow resetting an instrument, or bringing back into operation a system, that is found not to meet the TSR requirements without demonstrating that an unsafe condition has not been created. While this practice may be appropriate for power reactors (since reactor shutdown puts additional stress on the systems/core), it is not a good practice for non-reactor operations.

[S] Insert a discussion that a lower hazard mode of operation should be entered in these conditions, particularly for non-reactor nuclear facilities, until an assessment is made before normal operation mode is resumed.

Response:
Accept with Modifications

Accept in Part. Wording revised to original wording in current guide that addresses the need to change modes.

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
The first sentence should be revised to more accurately capture the text of 10 CFR 830, Subpart B, Appendix A, Table 4 that indicates "the section of the technical safety requirements on Limiting Control Settings will provide information on:" This is a technical content expectation of 10 CFR 830 vice a definition.

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
Consideration should be given to better aligning the TSR expectations for Limiting Control Settings to DOE-STD-1195-2011, *Design of Safety Significant Safety Instrumented Systems Used at DOE Nonreactor Nuclear Facilities*. Although this standard is only applicable to safety significant safety instrumented systems, it provides guidance on safety instrumented functions such as instrument response time that should be considered as a potential rule.

Response:
Reject

Change beyond the scope of this Guide.

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME Christopher.Long@inl.gov

1) Rule 2. Recommend changing "reset" to 'reset or adjusted to meet the LCS'. Reset makes sense for just an interlock.

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
The first sentence should be revised to more accurately capture the text of 10 CFR 830, Subpart B, Appendix A, Table 4 that indicates "the section of the technical safety requirements on Limiting Conditions for Operation will provide information on:" This is a technical content expectation of 10 CFR 830 vice a definition.

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.14, Section 4.3.4.3, 2nd para.	Suggested	Issue: SSCs that support the safety function of a SAC are not addressed in the discussion. Action: Include a statement that addresses how SSCs that support the safety function of a SAC are to be addressed.

Response:
Accept

Wording revised to clarify statement.

Suggested comment from Jennifer Kelley for Headquarters SC

First sentence - as written, implies all SACs credited for accident or transient sequence should be LCOs. Could be a directed action SAC.

Response:
Accept

Accepted. Wording revised to clarify statement

Last sentence of first paragraph - should include qualifier that this applies if the DG is credited for safety in providing power.

Response:
Accept

First sentence after the 10 CFR 830 seems to imply that all SACs be included in LCO format, particularly when considered with section 4.3.5. This is not consistent with section 4.3.5.2 which discusses both DA and LCO SACs. Suggest clarifying this section to indicate that SACs may be either LCO or DA.

Response:
Accept

Accepted. Wording revised to clarify statement

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] In the paragraph regarding good practices for developing LCOs, item 1 states that the TSR developer should consult with "facility engineers" in the development of an LCO. Consultation with "facility operating staff" is not clearly addressed in this section.

[S] Incorporate facility operating staff in item 1 or elsewhere in the section to emphasize consulting with facility operating staff as a good practice in LCO development.

Response:
Accept

Major comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
The TSR developer should also consult with the operators. TSRs need to be written clearly to be understood by those implementing the TSR and those required to comply with the TSR.

Response:
Accept

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
The last part of this paragraph should be separated out. "Actions should be specified that are reasonable to perform within the required time specified. The TSR developer should also consider the conditions under which surveillances or actions need to be performed. Under normal conditions it might be reasonable to expect an operator to climb a ladder to shut a roof vent within 20 minutes. This action might be dangerous or impossible under actual fire conditions" should have its own paragraph since it doesn't fit with the discussion of SRs.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC
In Item 6, fifth sentence - omit "at all times" to read: "Conditions must always be grouped by mode such that all conditions apply to all modes specified in the applicability."

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
If MAR vaules would classify the TSR, then it is acceptable to have to look at values in another document. You do not want to classify the TSR for MAR values, since reaction times for exceeding MAR values do not really require drastic quick actions. If the TSR is classified, it is harder to have available to the operator.

Response:
Reject

The operator needs to have all the information at his fingertips. You do not want them going to another document.

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
The ventilation example should require that the fans exhaust through the HEPA filters, not that they exist. (WIPP fire issues). Also what about the HEPA filters DP, if there is breakthrough, then they are of no use, what if they are clogged? DP should be added for the HEPAs.

Response:
Reject

This in only an example.

Major comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.15, Section 4.3.4.4, 2nd para.	Major	Issue: The following statement is made: "The LCS/LCO specification statement typically focuses on the most important SSCs and parameters and is not required to list all subcomponents." The statement is not consistent with 10 CFR 830 Subpart B, Appendix A, Section G 3: *Safety structures, systems, and components require formal definition of minimum acceptable performance in the documented safety analysis. This is accomplished by first defining a safety function, then describing the structure, systems, and components, placing functional requirements on those portions of the structures, systems, and components required for the safety function, and identifying performance criteria that will ensure functional requirements are met. Technical safety requirements are developed to ensure operability of the safety structures, system, or components and define actions to be taken if a safety structure, system and component is not operable.* Action: The statement should be revised to be consistent with 10 CFR 830 Subpart B, Appendix A, Section G 3, i.e., the LCO statement should • 1) identify those safety structures, systems, and components that provide the credited safety function, and • 2) associated performance criteria that define the minimum acceptable performance required to ensure the safety function is met.

Response:
Accept

Accepted. Wording revised per agreement with commentor to clarify.

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The bullets provide a discussion of three categories that the Action Statements, including mode changes, may fall into: Restorative, Eliminative, and Compensatory. While the Eliminative discussion notes the need for mode or condition change, the discussion in the Restorative and Compensatory bullets do not clearly address the need for considering mode changes. A statement emphasizing that the safety posture of the facility must be ensured consistent with the DSA is warranted in this section.

[S] Add a sentence after the third bullet (e.g., at the end of the paragraph following the third bullet) along the following lines: "In any event, the safety posture of the facility must be ensured consistent with the DSA."

Response:
Accept with Modifications

Accept in Part. Final paragraph of section was clarified.

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The 4th paragraph indicates that required actions "should" be completed within the allowed completion times, and that one "should" not enter into operational modes unless all applicable LCOs have been met.

Although the Guide itself may not establish requirements, the above language indicates that such actions may be allowed. There are other requirements and expectations that would make the above mentioned actions firm requirements.

[S] Revise the section to point toward these requirements to remove the apparent ambiguity.

Response:
Accept

Questionable wording deleted.

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
The last paragraph is confusing/misleading. Earlier you talk about actions to restore, eliminate or compensate for not meeting the limiting condition. This paragraph starts with you immediately changing modes to reach a state where the LCO does not apply. What should be the first thing the operator does? change modes or restore?

Response:
Accept with Modifications

Wording changed.

Suggested comment from Jennifer Kelley for Headquarters SC

Last paragraph - Change to read: When an LCO is not met, actions should ....provided in the action statements to compensate, restore, and/or place the facility in a mode..."

Response:
Accept

Paragraph revised

First paragraph, second sentence - Change to read: "An action statement should establish the steps and agreed upon time limits to perform the action or correct the condition or conditions ..."

Response:
Reject

Not accepted . Current wording is okay.

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The section discusses operability determinations and states: "If SSCs are observed to be functioning but under stress (such as elevated temperature, vibration, or physical damage), then judgment supported by an engineering analysis should be used to decide whether operability is being maintained." This guidance may be misinterpreted to allow to continued operation without

having assessed the extent of the "stress."

[S] Insert a discussion after the sentence stating that unless such conditions are analyzed in advance and discussed in the Bases section of the TSR or Chapter 4 of the DSA, the Action statement should ensure that a lower-hazard mode of operation is entered until the situation is studied, analyzed, and documented for review.

Response:
Accept with Modifications

Accepted in part – questionable wording removed

Major comment from Jennifer Kelley for Headquarters SC
First paragraph - Operability applies to SACs as well. Revise to add SACs to read: "Operability embodies the principle that an SSC or SAC can perform its credited safety function(s)..." "This principle extends the requirement of an LCO for those SSCs and SACs that directly perform a specified safety function (supported systems)..." Delete the last sentence.

Response:
Reject

Not accepted - the concept of operability is limited to SSCs.

There is a new requirement that an engineering analysis document is produced for a degraded SSC that is still OPERABLE. Such engineering analysis will require time to be performed and ocumented and approved. The situation, while waiting for that analysis, is not addressed. Guidance should be given on how to act while the engineering analysis is being produced. Guidance needs to be added that expert judgment should be used until an engineering analysis can be produced.

Response:
Accept with Modifications

Accept in Part. wording revised to simply engineering judgement should be used to evaluate the degredation of the system

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The 1st bullet regarding general principles of operability states: "An SSC is considered operable as long as there exists a sound technical basis for believing that it is capable
of performing its specified safety function(s)." While this statement is correct, it is not comprehensive and may lead to misinterpretation (because "sound technical basis" may not be documented anywhere).

[S] Revise the 1st bullet as follows:
"An SSC is considered operable as long as a sound technical basis exists for believing that it is capable of performing its specified safety function(s) as documented in the Bases section of the TSR or Chapter 4 of the DSA in advance. The facility should not continue operation in the same Mode while an alternate technical basis is being developed."

Response:
Accept with Modifications

Accepted in part - wording revised to address concern

Major comment from Jennifer Kelley for Headquarters SC

In bulleted items, add SAC. Operability applies to SACs as well.

Response:
Reject

Not accepted - SACs apply to people and programs, not equipment

Suggested comment from Jennifer Kelley for Headquarters SC

There may be an implication in the first bullet that and engineering analysis has been performed in stating that "there exists a sound technical basis for believing that it is capable of performing its specified safety function(s)." Guidance should be added that expert judgment is expected to be used to provide a sound technical basis until an engineering analysis can be produced.

Response:
Accept with Modifications

Revised

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.17, Section 4.3.4.6, 1st Suggested bullet

Issue: A statement is made that "an SSC is considered operable as long as there exists a sound technical basis for believing that it is capable of performing its specified safety function." The statement is a poor description for determining operability.

Action: Re-word the statement as follows: An SSC is considered operable as long as there exists a sound technical basis *that provides a reasonable assurance that the SSC* is capable of performing its specified safety function.

Response:
Accept

Wording revised as: An SSC is considered operable as long as there exists a sound technical basis supporting the capability of the SSC to perform its specified safety function(s). For active SSCs, satisfactory completion of the associated surveillance requirements provides a sufficient technical basis for operability.

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] Regarding Allowable Outage Time (AOT), the section indicates, "The AOT concept applies only to taking an SSC out of service for planned maintenance or testing." AOTs apply to any time an SSC is out of service, including unplanned maintenance or system failure.

[S] Revise the section to clarify that AOTs apply to any time an SSC is out of service, including unplanned maintenance or system failure.

Response:
Accept with Modifications

Accepted in part – we revised the full section to address Completion Times which we believe address the concern

Major comment from Jennifer Kelley for Headquarters SC
First paragraph - allowable outage times are addressed in LCO not outside them. See Appendix A, Section 2.3 of this guide. Change this paragraph to read: "Allowable Outage Time (AOT) is the allowed time, specified in the LCO action statement, that an SSC can be out of service." Delete remaining portion of this paragraph.

Response:
Accept

Accepted. Section revised.

Suggested comment from Jennifer Kelley for Headquarters SC

There is some discrepancy between the definition of AOT in this section and as described in Appendix A. Here, it is the time allowed to be out of service without entering a required action. In the Appendix, it states "Action statements must include the AOT to attempt to restore operability." Suggest revising the appendix for consistency with this section.

Response:
Accept

Accepted. Section revised.

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
The first sentence should be revised to more accurately capture the text of 10 CFR 830, Subpart B, Appendix A, Table 4 that indicates "the section off the technical safety requirements on Surveillance Requirements will provide information on:" This is a technical content expectation of 10 CFR 830 vice a definition.

Response:
Accept

Major comment from Steve Duarte for Headquarters GC

Included comments:

SME robin.henderson@hq.doe.gov
In the first paragraph, please spell out "OL."

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
First paragraph of this comment section, fourth sentence is a duplicate of the third.

Response:
Accept

Good catch.

Major comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
Just because a SR is met, does not mean the system is "operable". SRs verify operability, however a deficiency may exist that is not normally tested that would suggest that the system is not capable of performing its intended function. Recommend deleting, "The system is presumed to be operable if the surveillance requirements have been met. The system is presumed to be operable if its surveillance requirements have been met" as this is covered in 4.3.4.6.

Response:
Accept

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME christja@id.doe.gov
Second paragraph has a redundant sentence in the end: "The system is presumed to be operable if the surveillance requirements have been met. The system is presumed to be operable if its surveillance requirements have been met."
SME Christopher.Long@inl.gov
Typo. Same sentence is repeated: “The system is presumed to be operable if the surveillance requirements have been met.”

Suggested comment from Jennifer Kelley for Headquarters SC
Second paragraph of section 4.3.4.8, last sentence - repeats "The system is presumed..."

Response:
Accept

Recommend changing "Such grace periods should be stated explicitly in an SR" to "Such grace periods should either be stated

explicitly in an SR, or may be stated generically in the Use and Applications section of the TSR". This would prevent significant repetition with the TSR Surveillance Requirements.

Response:
Accept

If not previously identified, spell out "OL" first time.

Response:
Accept

"Surveillance Requirements (SRs) are used to ensure operability or availability of the safety SSCs and SACs identified in the OLs. SRs are most often used with LCS/LCOs to periodically validate the operability of SSCs that are subject to a limiting condition. The system is presumed to be operable if the surveillance requirements have been met. ~~The system is presumed to be operable if its surveillance requirements have been met."~~ (Delete or revise duplicate sentence.)

Response:
Accept

First paragraph of this comment section. Second and third sentences:

These two sentences appear to be redundant except the first one has "...operable if the surveillance...", and the second sentence has ".. operable if its surveillance...".

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
Your example directs **how** a value is to be measured. That is not the function of the SR startement. Tell me what is to be measured and the acceptable value to verify. The facility determines how to measure something unless it is an integral part of a system. The example should be "Verify that the pressure in Room 27A is a minimum of 0.05 inch WG lower than the outside atmospheric pressure." The TSr should not direct which gauge to read.

Response:
Accept

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] This guidance on Administrative Controls (ACs) notes the definition of ACs in 10 CFR Part 830 that calls for ACs that address "...those for reporting violations of the technical safety requirement." Some guidance is interspersed in the section related to TSR violations, but clear guidance is not included that the TSR section on ACs needs to address the circumstances for reporting TSR violations (i.e., include a section on what constitutes a TSR violation and the reporting of TSR violations).

The consolidated guidance on TSR violations in the current Guide (DOE G 423.1-1A) has been deleted (current Section 4.11, Violation of Technical Safety Requirements). Such consolidated guidance is warranted for sites to readily address TSR violations and reporting in the TSR document as required by 10 CFR 830.

The current consolidated guidance in Section 4.11 of the current Guide, could be improved upon by clarifying that a TSR violation exists if an operation is performed that is prohibited by the mode the facility is in or that a safety system is rendered incapable of performing its safety function (e.g., by maintenance) without entering the proper LCO (this elaborates on the concept of failing to comply with an LCO).

[S] Provide clear guidance on the need for addressing the circumstances for reporting TSR violations in the TSR section on ACs. Include consolidated guidance for what constitutes a TSR violation using the existing Section 4.11 modified with the interspersed guidance in the draft guide and the improvement noted above.

Response:
Accept with Modifications

Accept in part – Guidance from prior Guide on TSR violation re-incorporated back into Guide

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
The first sentence should be revised to more accurately capture the text of 10 CFR 830, Subpart B, Appendix A, Table 4 that indicates "the section of the technical safety requirements on Administrative Controls will provide information on:" This is a technical content expectation of 10 CFR 830 vice a definition.

Response:
Accept

Major comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
This misses the general specific-action AC. There are three types: Programmatic ACs, ACs, and Specific Administrative Controls. DOE-STD-1186 states, "Similar to the classification of Structures, Systems, and Components (SSC) as Safety SSCs, not all ACs requiring specific actions related to individual accident scenarios rise to the level of importance of SACs, as discussed in the previous paragraph. Similar to SSCs of lower importance, which are sometimes referred to as "important to safety" or "defense in depth" SSCs, SACs of lesser importance can be addressed under the implementation of related Safety Management Programs. However, when a specific action AC is elevated to the class of SAC, then the guidance of this Standard should be used to enhance assurance of the effectiveness and dependability of these important administrative controls beyond that which might be experienced if the specific action AC were simply to be implemented under the auspices of a Safety Management Program." Violation of a Programmatic AC is generally not a TSR violation. An AC that is of lesser importance than a SAC but is written as a specific-action AC, violation of that AC is considered a TSR violation. This could be stated that there are two types of ACs: Programmatic and specific-action AC. Specific-action ACs that take the place of a SS-SSC or SC-SSC are SACs.

Response:
Accept with Modifications

Wording revised to clarify statement.

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME Christopher.Long@inl.gov

1) The rules to report TSR violations are in 830 Appendix A and 830.205(a)(3). Consider both rules could be met by an AC requiring compliance with the ORPS Order without further description of how to respond to a TSR violation.

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.19, Section 4.3.5, 2nd para. Suggested	Issue: Discussion is provided addressing the selection of engineered SSCs over ACs. There is no reference to DOE-STD-3009 or DOE-STD-1189 or DOE G 420.1-1A guidance addressing the hierarchy of controls. Action: The discussion should reference the hierarchy of controls guidance provided in DOE-STD-1189, DOE-STD-3009, and DOE G 420.1-1A.

Response:
Reject

Hierarchy controls is in Section 4.1, no need to discuss again here.

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME Christopher.Long@inl.gov

1) Section 4.3.5, Page 19 provides guidance on operator actions to ensure their success. Consider guidance in NRC Regulatory Guide 1.62, "MANUAL INITIATION OF PROTECTIVE ACTIONS" revision 1 contains useful guidance for DOE's consideration of manual actions. Operator manual actions are reasonable when:

Design analyses determine the appropriate safety functions and corresponding protective actions for each plant design. The protective actions can be initiated automatically, or, in certain cases, can be accomplished solely by manual controls. Protective actions initiated solely by manual controls are subject to consideration of (1) the time necessary for the operator to analyze and manually respond to an adverse condition, (2) the time available for actions to be taken to mitigate adverse plant conditions, (3) the plant conditions expected at the time operation of manual controls is credited, (4) the range of conditions over which manual controls are expected to be in effect, and (5) the display variables necessary to provide for effective manual control.

Response:
Reject

This level of detail is more applicable for 1186

Suggested comment from Jennifer Kelley for Headquarters SC
Attributes for increasing human reliability seem unrelated to purpose of the Guide and need not be included here.

Response:
Reject

Not accepted - list gives good examples of what people need to do to make a SAC successful

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
The safety management program (SMP) descriptions should be consistent to the SMP definitions given in 10 CFR 830.3. For example, procedures is not given in 10 CFR 830.3 as a SMP and should not be listed in this Guide as a SMP.

Response:
Reject

Wording in list acceptable - list pulled from Table 4 of table 830.

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The section states: "Some programmatic ACs highlight major aspects of the program in bullet fashion" and then provide some examples without elaborating on the reason for the "bullets." In fact, identification of key attributes for SMPs is going to be required by the pending revision of DOE-STD-3009. The SMP section of the TSR needs to identify the key attributes for each SMP upon which the DSA hazard analysis relies for providing adequate protection. This reasoning for the existence of the key attributes must be acknowledged, built on, and enforced in this Guide.

[S] Revise the discussion to emphasize and elaborate on the need for key attributes to be defined in the TSR and ensure they are carried into the detailed SMP descriptions.

Response:
Accept with Modifications

wording revised to address issue

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.20, Section 4.3.5.1, last para.	Suggested	Issue: The following statement are made: "Note that active SSCs are sometimes assigned to ACs as well. This can be done for less critical SSCs when flexibility in implementation is desired ...." This seems to contradict the hierarchy of controls guidance per DOE-STD-3009 and DOE-STD-1189. Also, it is unclear as to whether safety SSCs or non-safety SSCs are being addressed. Action: Provide clarification as whether safety SSCs or non-safety SSCs are being addressed. Provide an example as to what is being addressed by the statements.

Response:
Accept

Wording revised to reflect agreement with commentor to clarify statement.

Major comment from Jennifer Kelley for Headquarters SC
The "factors" to designate a SAC should be replaced with the definition of a SAC from STD-1186. This seems like new criteria.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC
Second paragraph, last sentence before bullets - Change to read: "LCO/SR format may be more appropriate and preferred for a SAC if:"

Response:
Accept

It appears that the phrase "LCO/SR format may be more appropriate and preferred for an active SSC if:" may be intended to be "LCO/SR format may be more appropriate and preferred if:"

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.21, Section 4.3.5.2, 2nd para.	Suggested	Issue: Discussion is provided that "a more liberal use of ACs can be acceptable for Hazard Category 3 facilities." This wording is poor and contradicts the hierarchy of controls guidance. DOE-STD-3009 contains guidance addressing a graded approach that can be applied to simple, less hazardous facilities in development of a DSA and derivation of TSRs. It is recognized that 830.205 does not allow application of a graded approach for development of TSRs. Action: Replace the statement using the wording from DOE-STD-3009 addressing the application of a graded approach for the development of the DSA and derivation of TSRs.

Response:
Accept

Sentence deleted.

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
The use of ill-defined terms, user defined terms, or non-exact words in a SAC should always be avoided, since they allow interpretation of the SAC by the operator. Remove "nominally" from the SAC in this section. Otherwise what is "nominally" 4 ft, anything less than 5 ft, 4.2 ft, 4.5 ft, etc.?

Response:
Accept

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
DOE-STD-3009 should be listed in addition to DOE-STD-1186 for providing additional guidance and expectations for SACs.

Response:

Reject

This is the DOE standard for SACs. Standard 3009 only provides guidance on the selection of SACS. Standard 1189 provides guidance on use and development. Since the purpose of this Guide is to provide guidance on the Development of TSR, referencing only 1189 is appropriate.

Suggested comment from Jennifer Kelley for Headquarters SC
DOE G 424.1-1B, Section 3.3 states that the bases of hazard control documents should identify some relevant margins of safety. This section of the TSR Guide should reiterate this guidance.

Response:
Reject

Not accepted . The USQ guide will address margin of safety.

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The discussion of the Design Features (DFs) does not strongly emphasize the need to specify the surveillance or in-service inspections (ISIs) in section 6 of the TSR, stating only, "In some cases it may be appropriate to include or reference ISIs for design features in section 6 of the TSR." Due to the importance of these ISIs for ensuring a DF is available as credited in the DSA, specific coverage in section 6 is usually warranted (e.g., the overburden of igloos maintaining a certain depth, the berms not having developed cracks, the resilient floors not
being worn out).

[S] Revise the 4th paragraph to provide the general expectation that ISI's for DFs be specified in section 6 of the TSR.

Suggested wording includes: "Surveillance requirements or in-service inspections (ISIs) necessary to ensure a DF is available as credited in the DSA should be identified for each DF in section 6 of the TSR."

Response:
Accept with Modifications

Wording added that methods necessary to ensure Design Features are available as credited should be identified and In many cases it is appropriate to include or reference ISIs for design features in section 6 of the TSR.

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
If a DF can be significantly altered by operations personnel, like installing a blast shield on a furnace after closing the door or installing a retaining pin after placing a tray in a storage location (or fogetting to take those actions), then a SAC should be developed to install/implement the DF's protective function. This needs to be explained in the SAC section and repeated again here.

Response:
Reject

Level of detail too much for a guide.

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] Regarding TSR Bases, the 2nd paragraph states: "Although Part 830 requires that a basis be provided only for 'safety limits, operating limits, and associated surveillance requirements,' it is a good practice to provide a technical basis for other aspects of TSRs, when practical." This sentence does not clearly state these other aspects, specifically the key aspects of SACs and DFs. (Prior sentences in the paragraph do mention SACs.)

This last sentence should more logically be the first sentence (following the prior paragraph that notes what Part 830 requires).

[S] Move the sentence to be the first sentence and include SACs and DFs. Revise other sentences in Section 4.3.7 to address DFs where applicable.

Response:
Accept with Modifications

Sentence moved

Major comment from Jennifer Kelley for Headquarters SC

Last sentence - Inclusion of a "good practice" to provide a basis for other TSR aspects is an unneeded scope expansion. Sentence should be omitted.

Response:
Accept

This is different from guidance in existing Guide sect. 4.18 and doesn't seem to be an improvement and perhaps awkward in linking to a DSA safety system rather than the TSR requirement.

Response:
Reject

Not accepted , wording is OK as written.

Suggested comment from Jennifer Kelley for Headquarters SC
Last sentence of first paragraph after the 10 CFR quote could be misinterpreted that the ACs should have bases sections. Suggest rewording as follows: "Although Part 830 requires that a basis be provided only for "safety limits, operating limits, and associated surveillance requirements," a technical basis for other aspects of TSRs may be provide

Response:
Accept with Modifications

Accept in part. Revised to give option to writer to provide basis if warranted.

Delete the last sentence: ~~**Although Part 830 requires that a basis be provided only for "safety limits, operating limits, and associated surveillance requirements," it is a good practice to provide a technical basis for other aspects of TSRs, when practical.**~~

Or replace with a clearly permissive but not required statement (e.g., A technical basis for other aspects of TSRs may be included if desired.).

Response:
Reject

Suggested comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The discussion on "Application to Safety Analysis" does not include the need for TSR bases to discuss SSC functional requirements and performance criteria.

[S] Include SSC functional requirements and performance criteria in the discussion on "Application to Safety Analysis."

Response:
Reject

Not accepted. This information is already included in the DSA.

Suggested comment from Jennifer Kelley for Headquarters SC
First sentence - change "basis appendix is divided" to "basis appendix can be divided" to match current Guide and not so prescriptive.

Response:
Accept

Accepted - wording revised

Suggested comment from Jennifer Kelley for Headquarters SC
Under Mode Applicabiity, add "in" before "separate modes"

Response:
Accept

Accepted - wording revised

Suggested comment from Jennifer Kelley for Headquarters SC

In the first, second, and fifth bullets of Action Statement - Add "LCS/" before "LCO"

Response:
Accept

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The discussion on "Surveillance Requirement" does not clearly call for a discussion on the purpose of the surveillance requirement.

[S] Add guidance that the bases should briefly describe the purpose of the surveillance.

Response:
Reject

Not accepted. Current wording deemed adequate. Issue dropped by DNFSB staff.

Suggested comment from Jennifer Kelley for Headquarters SC
In the first and second bullets of Surveillance Requirement - Add "LCS/" before "LCO"

Response:
Accept

Major comment from Jennifer Kelley for Headquarters SC
Current Guide sect. 4.18.7 has guidance for when changes to the bases can be made without DOE approval. This needs to be addressed in the revised Guide.

Response:
Reject

Not accepted - this an implementation issue 10 cfr 830 requires sites to get DOE approval prior to a change in TSR

Suggested comment from Jennifer Kelley for Headquarters SC
For any reference cites, **it is a good practice to** provide the full title, date, and revision number.

Response:
Accept

accepted - wording revised to reflect intent

Appendix A: Structure and Format of TSRs

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
These operational modes are examples of modes and should be stated as examples.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC
This section should reference DOE-STD-3009, Section 5.5 as a starting point for mode definition.

Response:
Reject

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
These operational modes are examples of modes and should be stated as examples.

Response:
Accept

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
These are examples of SR frequencies and should be stated as such. Also, recommend adding the frequency of annually as at least once every 366 days.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

Suggest noting the allowed extension discussed in Rule 2 on page 30 for consistency as follows: "Frequency Notation. The frequency notations, as used in the surveillances and elsewhere, should be defined as follows when included in the TSR. Any allowed extensions should be specified."

Response:
Reject

Not accepted - current wording deemed adequate

I recommend including a notation for Annual and make it clear that other frequency notations may be defined.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

After second sentence - Add "Each separate LCS should have associated mode applicability, action statements, and surveillance requirements.

Additionally, the discussion of AOT covered under the LCS/LCO, although correct, is inconsistent with Section 4.3.4.7 of this guide.

Response:
Reject

Not accepted - current wording deemed adequate

Suggest rewording second sentence as follows: "Each separate limiting condition should have an LCO with associated mode or facility condition applicability, action statements, and SRs."

Response:
Reject

Not accepted - current wording deemed adequate

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
Consideration should be given to better aligning the TSR expectations for Limiting Control Settings to DOE-STD-1195-2011, *Design of Safety Significant Safety Instrumented Systems Used at DOE Nonreactor Nuclear Facilities*. This recent standard provide guidance on safety instrumented functions such as response time that should be considered as a potential rule.

Response:
Reject

Level of detail too much for this guide

Suggested comment from Jennifer Kelley for Headquarters SC
Recommend revising Rule 2 to read "The LCO should include an AOT to attempt restoration of operability.", which is consistent with the current guide. The reason for this is that not every LCO has or needs to have an allowable outage time to attempt restoration of operability. Some LCOs require immediate action, hence at AOT would be inappropriate.

Response:
Accept

Accepted - wording revised

Suggested comment from Jennifer Kelley for Headquarters SC
Recommend revising the second sentence to read "Action statements should include the AOT to attempt restoration of operability.", which is consistent with the current guide. The reason for this is that not every LCO has or needs to have an allowable outage time to attempt restoration of operability. Some LCOs require immediate action, hence at AOT would be inappropriate.

Response:
Accept

Suggest deleting the sentence "Action statements must include the AOT to attempt to restore operability", and require that any AOT be specified in the LCO itself. This would be consistent with section 4.3.4.7 as well as "Rule 2, directly above.

Response:
Reject

Not accepted . Current wording deemed adequate.

Suggested comment from Jennifer Kelley for Headquarters SC
Under the SR discussion, add SACs to read: "...and availability of safety-related SSCs/SACs." "Rule 1: SRs must be met for all safety-related SSCs/SACs for..."

Response:
Reject

Not accepted - SACs do not determine operability

Suggested comment from Jennifer Kelley for Headquarters SC
Last Sentence - Recommend changing ".... Any test exception should be explain..." to "Any test exception should explain...".

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC
Should be "Section 5 - Administrative Controls."

Response:
Accept

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME Christopher.Long@inl.gov
Section 2.3.1 proposes the creating of Emergency Operating Procedures. Consider specifying operator responses that might otherwise be taken as ACs, may instead be placed in an Emergency Operating Procedure(s). The AC section of the TSR could then specify the EOP(s) scope and adequacy in order to meet operator actions required by the DSA/SAR.

Response:
Reject

Considered acceptable as is.

Suggested comment from Jennifer Kelley for Headquarters SC
Delete **security plans**." This is not a good example.

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
What programs do you mean? Safety Management Programs? Should state SMPs, otherwise why list a program that does not have a defense-in-depth safety function? Why are you restricting In service surveillance to Boiler Code items, that is a bad example. You should have IT/ISS for all credited safety SSCs and d-in-d SSCs. I would think the list of SMPs in DOE O 425.1D Core Requirement 1 would be a good example list to start with.

Response:
Reject

Wording considered acceptable as is.

Suggested comment from Jennifer Kelley for Headquarters SC

"and under what ~~security~~ **storage requirements."**

Response:
Accept

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] Appendix A provides content on the structure and format of TSRs. The guidance of Section 2.3.1 on reviews and audits does not address Implementation Verification Reviews
(IVRs) of TSR controls. IVRs are addressed in the current guide (DOE G 423.1-1A) in regards to reviews and audits (Section 5.2.4). Without IVRs addressed, there is no clear guidance related to confirming implementation of new or revised TSR controls in Section 2.3.1.

[S] Include the language for IVRs related to reviews and audits in the current guide into Appendix A, Section 2.3.1.

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
Reviews and audits of the TSR? What is that, an IVR is done to verify implementation. This section should talk to the reviews/assessments and audits of safety management programs, USQ process, etc. That are done by independent review teams. Also the reviews of day-to-day documentation that the facility does, USQs, round sheets, SR paperwork, etc.

Response:
Accept

Major comment from Jennifer Kelley for Headquarters SC
Last paragraph, first sentence - "off-site" should be changed to "independent". The second paragraph of this section states "The second is the review and audit of activities and programs affecting nuclear safety performed independently of the facility staff." It is not necessary that this independent review group be off-site. It can be but does not have to be.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC

Delete:

~~**Reviews and audits of activities affecting facility safety have two dstinct elements. The first of these is the review performed by facility personnel to ensure that day-to-day activities are conducted in a safe manner consistent with the TSRs. The second is the review and audit of activities and programs affecting nuclear safety performed independently of the facility staff.**~~

~~**Facility staff reviews should include: TSR changes, USQ determinations, proposed tests and experiments, procedures, programs, facility changes and modifications, facility operation, maintenance, and testing; DOE and industry issues of safety significance; and any other safety-related items.**~~

~~**Reviews by the off-site safety organization should include these same items and in addition: conformance with TSRs, violations of codes, orders, and procedures that have safety and health significance, Occurrence Reports, staff training, qualifications and performance, quality assurance program adherence, unanticipated deficiencies of SSCs that could affect nuclear safety, significant, unplanned radiological or toxic material releases, and significant operating abnormalities.**~~

This text is redundant to existing requirements (e.g., 10CFR830) and/or guidance, or it may be misconstrued to require additional reviews that may not be applicable. It does not add clarity or useful guidance.

Response:
Reject

Not accepted - this paragraph is a good primer to next two paragraphs

Major comment from Steven Petras for HSS-DR-DNFSB

DNFSB Comments:

[C] The guidance on DFs (for Section 6 of a TSR document) does not include the need to identify surveillance requirements or in-service inspections (ISIs) necessary to ensure a DF is available as credited in the DSA (as noted in prior comment on Section

4.3.7).

[S] Add an item (3) to the guidance on content of the Section 6 DFs. Suggested wording includes:

"(3) Surveillance requirements or in-service inspections (ISIs) necessary to ensure a DF is available as credited in the DSA should be identified for each DF in section 6 of the TSR."

Response:
Accept with Modifications

Accept in part. Note added to address in-service inspections.

DNFSB Comments:

[C] The heading of 2.3.2: "Section 5-Design Features" is incorrect; it should state Section 6.

[S] Correct the heading.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC
Should be "Section 6 - Design Features"

Response:
Accept

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.32, Section 2.3.2	Suggested	Issue: This section addresses design features. Design features can include containers which are credited as providing a preventive or mitigative safety function. In many instances, a reduced damage ratio (DR) or a DR of zero is identified for respective containers. Further, containers require periodic verification or testing to ensure they continue to meet their performance criteria, i.e., perform their intended safety function. However, this importance aspect of ensuring the reliability of a design feature is not addressed or actions to be taken if the design feature has been discovered to be in a degraded condition. Additional guidance is needed. Action: Provide additional guidance addressing the process for ensuring the reliability of the design feature (e.g., container) and actions to be taken if the design feature is discovered to be in a degraded condition. Also, provide an example in Appendix B.

Response:
Reject

Wording deemed adequate.

Appendix B: TSR Examples

Suggested comment from Jennifer Kelley for Headquarters SC

Figure 18a is redundant to Figure 7a.

Figures 7b and 18b address the same topic. Are both intended?

Response:
Accept

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
This is a poor example. How does one open a relief valve? Why do I need to verify the pressure relief setpoint every shift?

Response:
Accept

Example revised.

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
Condition A does not seem to make sense. The second part of Condition A should probably read "Less than 100%..."

Response:
Accept

Example revised.

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
The frequency of "every shift" is a bad example for this SR

Response:
Accept

Example revised.

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME mcanulmj@id.doe.gov
This is a bad example. The standby power diesel generator is required in all modes and must be returned to operable status within 8 hours. Any degradation of the diesel generator would likely result in a TSR violation (failure to meet the required completion time) and the diesel generator could never be taken down for maintenance.

Response:
Accept

Example revised.

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
Most of the examples of LCOs in this appendix are lacking what the limiting conditions are since they do not describe what is required to be OPERABLE. In Section 4.3.4.3 you state "The operator should be able to grasp quickly from looking at the LCO (a) what operating parameters/conditions represent the lowest functional capability or performance for a specified required Limiting Condition, (b) how to measure or determine that parameter condition is met, and (c) what to do if a Limiting Condition is not met." Just saying in the LCO that the LOW Level/Steam Flow Interlocks shall be OPERABLE does not tell the operator what the parameters are. What is required to be OPERABLE, power to the circuit, the fact that a trip will shut/open the required valves/switches in a required time, etc.? If this is an interlock, is there a loop calibration required?

Response:
Accept

Example revised

SME johnsone@y12.doe.gov
The bases statement for Action A.1 does not contain the information listed in Section 4.3.7 of this guide "Address the level of protection provided, **the probability of an event occuring during the period covered**, and how the required actions compensate for LCO deviations."

Response:
Accept

Example revised

Suggested comment from Jennifer Kelley for Headquarters SC
Recommend using a different example of Instrumentation LCO. The value of defining the Criticality Alarm System as an LCO for

mitigation of a criticality event is dependent on the credited dose avoidance for emergency actions in response to the alarm, which in some cases is minimal or not justified. For events where reoccurrence of the criticality is credible, such as for solutions, the credited dose mitigation may be significant, however, even in this case the establishment of an LCO for the limited mitigation has questionable value. The preferred approach for criticality events is prevention and examples should stress this approach.

Response:
Accept

Accepted. Example revised.

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov

I do not understand this LCO, what is the limiting condition? Is it on the Confinement system or does each confinement system have its own LCO. Also is just having the components what makes the system OPERABLE? Are there requirements on each fan or is it okay to have the supply fan CFM far exceed the exhaust CFM. Doe we have to exhaust through the HEPAs? What are the Differential pressure (DP) requirements for the HEPAs? Is zero DP okay (breakthrough)? Is clogging okay? What efficiency and size requirements do they need to meet? What about the alarm setpoints, what does the alarm do, trip fans/change fan speeds? or is that another LCO? Having one system in operation that is not OPERABLE buys what? What is the lowest functional capability for the confinement system. This LCo does not describe it.

Does the system switch to the other system on fan failure?

Response:
Accept

Example revised

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
This appears to be a duplicate of Figure 7b

Response:
Accept

Duplicate deleted

Major comment from PK Niyogi for Headquarters NE

Included comments:

SME Christopher.Long@inl.gov
SR Frequencies are described in several locations. One comment was provided for all. Page 11 (Section 4.3.2), page 18 (Section 4.3.4.10, "Surveillance Requirement Frequencies") describe time based frequencies. Facility condition based frequencies are included in Appendix A, page 27. For facilities that have condition based frequencies, please consider that the Guide include an explicit allowance in SR 4.0.3 for a 24 hour delay due missed (not failed) surveillance tests with facility condition based frequencies:

When it is discovered that a surveillance with a frequency based not on time intervals but on specified facility conditions or operational situations has not been performed when specified, SR 4.0.3 allows the full 24-hour delay period during which to perform the surveillance.

Response:
Accept

Example revised.

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
The programs in this section do not call out the specific DOE order like the examples in Section 4.3.5.1.

Response:
Accept

Example revised.

Appendix C: Independent Implementation Verification Reviews (IVRs)

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
Should point out that thiese are suggested approaches, not requirements. There is no order or CFR that requires IVRs. Some sites have far more mature processes that differ from these approaches.

Response:
Accept

Suggested comment from PK Niyogi for Headquarters NE

Included comments:

SME Christopher.Long@inl.gov

1) Typo. In downloaded PDF, pages 75 to 94 have page headers that alternate between Appendix B and Appendix C.

Response:
Accept

Major comment from Jennifer Kelley for Headquarters SC
First paragraph - This draft omitted the sentence in the current Guide "However, as recommend in this Guide, the most important commitment and assumptions should already be captured in the TSRs." It is important that this sentence or similar be retained so that the IVR focus is the TSRs.

Response:
Accept with Modifications

Accept in part. - wording revised

Major comment from Jennifer Kelley for Headquarters SC

The practice at our site is to conduct a MSA or RA as the sole vehicle for documenting readiness to startup or full implementation of the revised safety basis. The IVR process is separate and not required in addition to the MSA or RA process. The statement that the IVR should be performed prior to declaring readiness needs justification (requirement or standard reference, etc.) or should be revised, the MSA or RA is an adequate process without the added redundancy of doing an IVR.

The implementation process should be efficient and complexity based on the level of change involved using a graded approach.

Response:
Reject

Not accepted - This wording would require readiness reviews for safety basis changes, which is not the intent of 425.

Suggested comment from Jennifer Kelley for Headquarters SC
Last sentence - this sentence states that the IVR should not be "a substitute for any part of" a Readiness Review. Consider the NNSA Tech Bulletin 2011-1 which states that an IVR could be used to de-scope part of the ORR or RA.

Response:
Accept with Modifications

Accept in part. Slightly revised.

Major comment from Jennifer Kelley for Headquarters SC
The material in this section and the splitting out of safety basis changes into 3 categories is new and needs to be characterized as just one approach of grading the review.

Response:
Reject

Not accepted , commentor was looking at 2001 version of guide

Suggested comment from Jennifer Kelley for Headquarters SC

The example table of a phased approach does not add value and should be omitted.

Response:
Reject

First paragraph, the sentence "However, if periodic SMP program ..." seems out of place and would be better moved to the end of the preceding paragraph.

Response:
Reject

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P 79, Appendix C, last suggested sentence before section 4	Issue: This sentence reads "What approach DOE Takes should be determined as part of the integrated oversight planning". Suggest adding reference to DOE G 226.1-2A since it provides detailed guidance for DOE oversight of IVRs. The guidance is in section 4.1.2 under #3 with respect to IVRs. This section of the oversight guide references the TSR guide.

Suggested comment from Jennifer Kelley for Headquarters SC
First paragraph, last sentence - reword "major modification of a safety basis" if something other than Major Modification in the 830 sense is intended.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC
first line - change to "The following is an example template ..."

Response:
Accept

Major comment from Cathy Tullis for Headquarters NA

Included comments:

SME johnsone@y12.doe.gov
All of these examples are not really CRADs, they are OCs (objectives and criteria) and LOIs (lines of Inquiry). The review approach is not listed (doc reviews, interviews, evolutions, etc.) Why would the auditor have to describe the document work process? They are there to see if one exists. Many of these LOIs are poorly worded and have the auditor describing processes instead of asking if the implement the process as descibed in the DSA/TSR.

Response:
Reject

Current wording acceptable with current use of the term CRAD

Suggested comment from Cathy Tullis for Headquarters NA

Included comments:

SME KELLYDJ@NV.DOE.GOV
The SB change document category row in the table for "Drawings and other design documents per Appendix D of DOE G423.1-1A" needs to be updated for this revision to the guide since Appendix D will now be Appendix C and the guide will be given a new number.

Response:
Accept

Suggested comment from Jennifer Kelley for Headquarters SC
This item refers to measures in Section 3 of STD-1186. That section is 6 pages long. Need to be more specific in what attributes are being referred to.

Response:
Reject

Not accepted - this is only an example. Sites can come tailor this to reflect the detail they need

Appendix D: Conversion of Technical Specifications and Operational Safety Requirements to Technical Safety Requirements

Suggested comment from Sharon Edge-Harley for Headquarters EA (Enterprise Assessment)

SME amacdougall@ntc.doe.gov wrote:

P.95, Appendix D	Suggested	Issue: Appendix D addresses the conversion of tech specs and OSRs to TSRs. OSRs were last used almost 20 years ago. The usefulness of the appendix is questionable. Action: Delete the appendix.

Response:
Accept with Modifications

Cautionary note placed at top of Guide to say the appendix is not applicable to sites with DSA developed under S 3009